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Market power versus regulatory power in the Spanish electricity system, 1973–1996☆

Josean Garrués-Irurzun *

Department of Theory and Economic History, Faculty of Economics and Business, University of Granada, Campus Cartuja s/n, 18071 Granada, Spain

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ABSTRACT

This study not only establishes that the institutional changes (the change of political regime) and economic changes (the energy crisis) that occurred during the 70s and 80s had an important effect on business strategies within the Spanish electricity sector, but, above all, it shows how the resulting regulatory model was not the product of any clearly defined plan on the part of the Spanish authorities (as the majority of authors seem to implicitly or explicitly maintain), but rather it arose from the dialectical interaction between companies which resisted losing the power of the market, and institutions which, in order to define any medium term energy policy in the future European domestic electricity market, required an increase in their regulatory power.

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"Two conclusions seem clearly to emerge. First, that competition has a vital role to play in the public utility industries. And, second, the proper balance between competition and monopoly, financial integration and intercompany coordination, voluntary and compulsory, will vary from one regulatory situation to the next and from one moment to the next–and must be the subject of constant regulatory attention and concern".[1]

1. Introduction

The behaviour of the Spanish electricity sector, under the institutional framework of the European Union, shows ever greater similarities with that developed in other neighbouring countries. However, when the logical conflicts between States and/or companies over the shape of the future European energy market have occurred, the pragmatic approach of experts has seldom taken into account the conditions and historical inertias which had influenced the different development of these systems. This omission has resulted in a partial understanding of the real situation and, consequently, in the bad design and

☆ The first version of the present work can be found in Garrués [1 and 2].

* Tel.: +34 958 249913; fax: +34 958 249995.
E-mail address: jgarrues@ugr.es.

[1] Kahn [3, p. 325].

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implementation of the policies created to shape a more stable and efficient future.

In addition to establishing that the institutional changes (the change of political regime) and the economic changes (the energy crisis) that took place in the 70s and 80s had an important effect on the Spanish electricity sector, the present study principally demonstrates how the resulting regulatory model, far from being the outcome of a clearly defined plan by the authorities, as most authors appear to maintain, was the product of the dialectical interaction between companies which resisted losing market power and an Administration which, in order to define a medium term energy policy, needed to increase its regulatory power. The regulatory model that began with the new Spanish democracy, although more efficient than that set up by the electricity cartel during the Franco regime, was still less than perfect because it sought solutions that were short term and in principle agreed by concensus with the electricity companies. It is true that the state quickly took control of electricity policy, but the way this policy was carried out was always heavily conditioned by the habits of the past. In addition, the gradual improvement of the regulatory system was always accompanied by the renewed negotiating power of the most important companies, resulting from the successive waves of concentration within the sector, particularly as the Spanish electricity system has had to adapt to the demands of a new, more liberalised European electricity model.

Given that in the rest of the large European countries (United Kingdom, France and Italy) the current process of liberalisation of the electricity market has been deeply influenced in its origins and development because it was taking place in sectors which had been nationalised for more than half a century and were in need of significant processes of privatisation and/or restructuring,[2] it seems obvious that the origin of a large number of the defects and virtues which affect the present process of liberalisation and restructuring in Spain can also be found within a framework that considers not just the short term analysis.[3]

The aim of this article is to present the strategies adopted by Spain's two most important private electricity companies (Iberduero and Hidrola) during a period that was especially relevant in the development of the Spanish electricity sector; the years prior to the process of liberalisation which started with the Law 54/1997. With good reason, the sector had to adapt itself to the new conditions resulting from, on the one hand the energy and economic crises, and on the other, the conditions arising from the political changes, which required increasing intervention by the State Administration. This intervention resulted in the change from a system of company self-regulation, which had existed since 1944 through UNESA – the management pressure group in the electricity sector,[4] to one of strict regulation in accordance with the energy policies of the different governments.

As the production and financial decisions of the companies when facing the energy and economic crises of the 70s[5] were tightly controlled by the growing state intervention,[6] the electricity companies devoted their main efforts towards conditioning, modulating, and qualifying the new regulatory system.[7] Given the oligopolistic nature of the sector these strategies were channelled through its management institution (UNESA). The special characteristics of each company, the specific economic conditions of the period and the strengthening of intervention make it possible to recognise, within their common front, particular actions which are of great interest when trying to understand, on the one hand, the business dynamic of a key sector in the economy, and on the other hand, the form of the particular 'traditional' model of regulation applied in Spain, upon which was later slowly established the current process of liberalisation.[8]

The structure of this article, beyond the present introduction, consists of four parts. The second part deals with how the new democratic state regained control over electricity policy and the crisis in the self-regulatory model of the Franco period. The third part describes the accelerated transition towards a new regulatory regime, and asks whether the restructuring was by agreement or whether it was enforced. This will be done by explaining the changes generated by: (i) the new system of operation (Explotación Unificada del Sistema Eléctrico Nacional Unified Operation of the National Electricity System) and transmission (Red Eléctrica de España—Spanish Electricity Network); (ii) the nuclear moratorium placed on Valdecaballeros and Lemóniz; (iii) the exchange of assets between companies, following the example of Hidrola and Iberduero; (iv) the establishment of a new tariff system (MLE); and the role of the Red Eléctrica as the tool for regulation. The fourth part outlines the first responses of the electricity companies in anticipation of the European market – the creation of Iberdrola and the behaviour of Endesa. The final part, as a conclusion, presents the main interpretations that I have made of the regulatory model established from a critical point of view, while remaining open to future debate.

2. The democratic state regains control of electricity policy: the crisis of the self-regulatory model

After the Spanish Civil War (1936–1939) the most important decisions on regulation of the system displayed a high degree of assent between the regulator and the companies. The administration directly accepted many of the approaches and demands of the electricity pressure group, UNESA (1944).[9] The most representative example from the period in question was the participation of UNESA in the revision of the National Electricity Plan – Plan Eléctrico Nacional (PEN) (1974–1985), which, given the world energy panorama, strengthened the role of domestic resources and, above all, the development of nuclear energy.

As had become normal, in order to ensure the development of their electricity policy, the government achieved the commitment to invest from the companies in exchange for specific compensation and incentives (official credit, financial exemptions, etc.). This conduct became the norm throughout the PEN by means of the so-named Regimen de Acción Concertada (Decree 175/1975 of 13th February), which the Minister of Industry (Pérez Bricio) highlighted as an example of collaboration between the administration and the electricity companies, which "*in no sense is the State taking over*".[10]

However, after the end of 1977, different media started to voice the opinion that the sector should undergo a structural and institutional modification in accord with the new times. The establishment of a democratic regime, although imperfect, would bring into question the abusive role played by the electricity companies. The

[2] Newbery [4] and Gilbert and Kahn [5].

[3] Arocena et al. [6].

[4] Gómez Mendoza et al. [7].

[5] Garrués [8,9].

[6] Segura [10] and Rivero [11].

[7] Rodríguez Romero [12, p. 500], for example, admits that the bigger and more efficient businesses reinforced their strategies against the incentives plan set out in the MLE.

[8] The concept of 'traditional' regulation refers to the extensive type of intervention carried out by the State in the electricity companies, vertically integrated and organised under regional monopolies in Spain, which historically were established in many countries during most of the 20th century – related to the planning, operation and remuneration, until the establishment of 'new' regulation for the market (regulation for competition) connected with the processes of privatisation and liberalisation initiated in the last decades of the Twentieth century. Ariño and López de Castro [13].

[9] The opinions of Arocena et al. [6, p. 389–90] on the pressure groups and the regulation are very interesting. For another perspective, Antolín [14] gives us a long-term and more contextualized version of this subject.

[10] In the words of José María de Oriol y Urquijo (Chaiman of Hidrola). From the Records of the Hidroeléctrica Española Board of Directors (RHBD), 2-1-1976, p. 16.

significant questions that affected the sector would be submitted to parliamentary approval, and the press would be a privileged spectator, mediators of the previously unrecognised popular will.

The electricity companies, faced with these changes, defended the *status quo*, particularly in those matters which left-wing parties had highlighted in the discussions on the PEN; specifically those referring to the control mechanisms to which the companies should be subjected so that they fulfill their function of covering demand, the nationalisation of the high voltage grid, and the doubts over the nuclear programme. In order to tone down some of the demands indicated and show that the responsibility for regulating the sector lay with the government and not with UNESA, the right wing introduced minor changes to the new PEN (1978–1987) which were of little significance. It stayed this way until the Socialist Party (PSOE) were elected into government in 1982, when the previous institutional inertias were really broken down.

The Socialist leaders had an alternative energy model. An orderly transition towards a stable model in the long term required a change from the existing planning system as well as the creation of a new energy framework in keeping with the new social and democratic reality – which created shared wealth, compared to the concentration of profits in private hands previously existing under the banking and electricity oligarchy.[11] The supply of electricity, according to the Socialists, had been in the hands of the large companies, with an almost completely ineffective social control, and with the market divided into regional monopolies, which had given rise to an electricity system that was inefficient and not particularly integrated.[12] To correct these excesses they proposed two measures: abandoning the nuclear programme and rationalising the structure of the sector, in order to stand up to the banking pressure groups. Planning should no longer be a stimulus to increased consumption at any cost, but rather it should be a new regulation which serves the needs of the whole society. According to the Socialists the necessary efficient, and transparent, management was inevitable if the public sector intervened in the management of electricity transmission, under the threat of nationalising the sector. In addition, the new single high tension grid management company would make possible the regulation of the whole sector, because it was a way of finding out the real costs of electricity production, which would help to produce a suitable tariff policy, as well as an optimum allocation of supply to reduce the losses in transmission and improve the development and maintenance of the grid.

The strategy of the electricity companies at that time of great uncertainty was to safeguard the unity of the sector in order to strengthen the ability of UNESA to negotiate with the government. Logically, the companies were opposed to the future nationalisation of the high voltage grid (RAT–Red de Alta Tension) and to the nuclear moratorium. On the one hand UNESA argued that since its founding it had efficiently fulfilled its function of supplying the entire Spanish market, and on the other hand that the Government, in its election programme, should condition its nuclear moratorium to the needs of demand.

3. The accelerated transition towards a new regulatory regime: a consensus over restructuring?

3.1. The unified operation of the National Electricity System and the Red Eléctrica de España S.A.

The first contact between the electricity sector and the new government was concluded with the signing of the Protocol of June 1983 (a mutual co-operation agreement). This stipulated that UNESA and the administration should set up three negotiating commissions; on the high voltage grid (HVG), the revision of the PEN, and on Tariffs and Financing. To the extent that the negotiations were all-embracing, the strategy of the management organisation was to follow what was set out in the protocol to the letter. Relative to the constitution of the public company set up to manage the HVG, the electricity companies aimed to take on responsibility for interpreting the instructions laid out by the Ministry of Industry and Energy on the operation of the network, only surrendering the ownership of essential infrastructure paid for by the State. As for the nuclear moratorium, the companies wished to continue with the four nuclear plants under construction, while the ministry had the intention to authorise two of them (Trillo I and another to be decided – Vandellós II), to halt work on two of the others (Lemóniz and Valdecaballeros), and to study the fate of the fifth one (Trillo II).

However, as the regulator went beyond what had been established in the Protocol, the companies expressed their discontent for the loss of business autonomy implied by the new way of operating the electricity system.[13] On the one hand they interpreted the new system of compensation (Order 30/7/1984) as being directed by criteria that were '*absolutely nationalising*',[14] given that from a theoretical tariff the average price, the intention was to calculate the standard cost for each company depending on their productive structure and the market structures established by the Administration; the Law of Unified Operation of the National Electricity System (L 49/1984) managed by Red Eléctrica (RD 91/1985), was seen by them as '*a complete reduction in the operating freedom of the Companies*'.[15] In fact, after a fair deal of friction with the regulator, the conflict over responsibilities with Red Eléctrica was resolved, at the beginning of April 1986, by way of '*a gentlemen's agreement which without being signed would be of equal worth*' (the underlining is the author's emphasis),[16] by which UNESA would carry out the unified operation in agreement with the companies, while Red Eléctrica would take charge of the optimisation of the general system (see Section 3.6).

3.2. The nuclear moratorium: Valdecaballeros and Lemóniz

The decision to build nuclear power stations in Spain had been justified by the diversification of supply sources, and the need to satisfy the large increase in demand prior to the 1973 oil crisis. Within the period studied, it gained institutional support through the PEN (1975–1985). The strong anti-nuclear sentiment of the opposition parties and of public opinion posed problems for the centre-right government (UCD) in their attempts to develop nuclear power, counteracting the pressure exercised by the electricity companies in favour of speeding up the granting of licences.

The delay in the authorisation of the Valdecaballeros plant led to Hidrola temporarily suspending the project in November 1978. Added to the environmental and political arguments against the construction of nuclear plants was the decline in electricity consumption resulting from the first oil crisis. In fact the new PEN (1978–1987), adapted to economic and energy

[11] Lancaster [15].
[12] FEMUGT [16, p. 143].

[13] It changed from an operation system managed by each business (with contracts for the exchange of electricity between them and optimisation through, first, Reca and, later, Aselectrica) to an electricity pool for the whole Spanish market, smoothed out by the existence of the 'Electric Subsystems' and with the theoretical incentives – not well developed, to force the exchanges of assets, Beato [17].
[14] Records of the Hidroeléctrica Española Executive Board (RHEB), 29-1-1984, p. 2.
[15] RHBD, 28-3-1984, p 10. A similar opinion is maintained by Martínez López-Muñiz [18, p. 341–52].
[16] RHEB, 9-4-1986, p. 9.

circumstances, reduced the capacity of nuclear power to be constructed, even though it maintained that it was still necessary to build five of the eight plants that had previously been approved. While the work on Valdecaballeros was delayed and the demonstrations against nuclear power continued, Hidrola intensified their discussions with the Minister for Industry (Bayón) to agree on their financial benefits for their power station, which was expected to be finished in 1987. The approval of the next PEN (1981–1990) by the final UCD government, which favoured the development of nuclear power in Spain, never came due to the general election of October 1982. The policy of the Socialists, who won the election, of limiting nuclear power influenced the new PEN (1983–1992). In fact the 1983 Protocol between the electricity companies and the administration set the conditions for delaying the construction of two of the nuclear power stations for between 2 and 5 years. The Ministry of Energy, faced with the reduction in demand and the deep indebtedness of the companies, decided it was better to service the interest and depreciation on some of the nuclear investments, through the tariffs, rather than to proceed with their construction. Hidrola's arguments to the Minister of Industry (Solchaga) over the need for Valdecaballeros to cover the energy deficit in the Southern part of the peninsular had no effect, because in November 1983 the Dirección General de la Energía halted work on the second reactor at Valdecaballeros, and 4 months later the Counsel of Ministers did likewise with the first reactor. The high degree of uncertainty which hung over the halted nuclear programme, due to the automatic revision clause in the PEN (in relation to the variations in cost), was definitively laid to rest on 9th April 1992, when Congress approved the new PEN (1991–2000) including the abandoning of Valdecaballeros.

In the Basque country, Iberduero struggled to bring the Lemóniz nuclear power station into operation against a political background of a far more radicalised anti-nuclear opposition. ETA's assassination of the Chief Engineer for Lemóniz (Ryan) in February 1981, in practice, made it a matter of State which would have to be negotiated between the central government and the Basque government at a particularly sensitive moment; that of the handover of political powers. The new legitimacy achieved through the '*Vitoria Agreement*', signed by the three parties – central government, Basque government, and Iberduero, in April 1982, was proved to be insufficient just 1 month later when the Project Director for Lemóniz (Pascual) was also assassinated. The ultimatum from Iberduero to suspend the established contracts, given that restarting work would endanger the lives of their workforce and also the economic viability of the whole company, passed the problem of Lemóniz over to the government. In August 1982 the government responded by way of a specific legal manoeuvre,[17] backed up by the threat of a complete takeover of the company, which meant that just the first reactor would be built. Iberduero's chairman (Gomez de Pablos) approved of the government's intervention (expropriation was the most acceptable solution, the agreed confiscation was too risky, and complete abandonment was unacceptable) because it supposed an effective and legal commitment by the State. However, the government's refusal to separate the power station from the rest of Iberduero placed the company in a difficult position, because ETA was opposed to any resumption in the work. Nevertheless the socialist's nuclear moratorium relaxed the pressure on the company in relation to this particular issue, but not completely, because, as the company chairman (Gómez de Pablos) had anticipated a few months earlier, the company began a new phase during which they had to guarantee '*the survival of Iberduero despite Lemóniz*'.[18]

3.3. *The exchange of assets*

The deep indebtedness of the sector, visible in the homogenised audits that had to be submitted to the administration in January 1984 for the increase in tariffs, once again showed the need for financial restructuring. The sector committed itself to the following actions: (a) an exchange of assets and markets to balance out the productive and financial weaknesses of certain companies, (b) a programme of investment in generation, and (c) a new system of compensation, as long as the companies continued to count on the support of the government.

3.3.1. *Hidrola's advance planning*

Hidrola, despite enjoying a good economic situation, also wanted to participate in the incentives that the new decree on tariffs would provide for those who participated in the exchange of assets. In any case, their collaboration was inevitable because the administration wished to restructure the two most important electricity markets in Spain; Madrid and Catalonia. However, the regulator's plans were greatly affected when Hidrola purchased Hidroeléctrica de Cataluña (Hidruña) in November 1984.

This purchase brought two advantages. From the strategic point of view of the sector, this manoeuvre was intended to check moves by the Instituto Nacional de Industria (Endesa) in Catalonia, as well as preventing conflict with other electricity companies (Iberduero, Sevillana and Unión) over a division of the Madrid market formulated contradictory to previous pacts. That is to say, it supported the maintenance of the *status quo* in the sector, meaning the private companies would enjoy the privilege of distribution, while the public company Endesa would continue to be limited merely to generation (the spirit of the Endesa Contract).[19] From the business point of view, the purchase of Hidruña was the quickest way to increase the nuclear capacity of Hidrola and to acquire a share of a very dynamic market (20% of the Metropolitan area of Barcelona) at a reasonable price (€1406 million), even though it would delay their financial stability until 1993. In short, through this intelligent manoeuvre, Hidrola not only chose how they would contribute to the financial stability of the sector in the way that best suited their own interests, but also by offering the administration an alternative solution for the Catalan market and, above all, the Madrid market they avoided government opposition and conditioned later interchanges to the advantage of private companies in difficulties.

Although UNESA and the administration laid the foundations for an agreement on 20th December 1984, it took time to reach the final agreement on interchanges and complementary measures for restructuring (financial, accounting, and tariff-related). In the Agreement of 29th October 1985, Endesa insisted that the exchange of assets should be conditional on the outcome of the conversations over the Endesa-Group of Companies Contract (Endesa-Grupo de Empresas), after mediation by the Minister of Finance (Solchaga) over the prices to be enforced in the latter, it was finally signed on 30th December. Likewise after no small number of problems, as we shall see in the discussion of Iberduero, the II Protocol between the electricity companies and the government was signed on 25th February 1986. On this occasion the administration gave in to the idea of a generic protocol and individualised restructuring, as well as to a slower amortization of

[17] A Royal Decree that was not against the free market – through nationalisation or expropiation, and neither did it give too many powers to the Basque Government – a Public Private Partnership.

[18] Records of the Iberduero Board of Directors (RIBD), 28-7-1982, p. 259.

[19] As Rodríguez Romero [19, p. 360] indicates, the Spanish electricity companies under different regulatory contexts have preferred to increase business size rather than to promote competition.

nuclear assets, but it freed itself from previous commitments (The 1983 Protocol and the 1985 interchanges).

Hidrola's new chairman (Iñigo de Oriol) recognised to his Board of Directors that, faced with the threat of no increase in the tariffs, the sector's negotiating strength had been much limited, although he remained optimistic because the financial recovery through consolidated groups included Hidruña, something which had not featured in the previous Protocol (1983). In fact, although Hidrola expected to receive 35% of the sectors funds for financial stability on account of Hidruña, it complained against the regulator's discretion because they were not allowed to use this money to increase their dividend. According to Oriol the administration was acting unilaterally against the collaboration agreed in the second Protocol. The different problems Hidrola had with the regulator made it necessary for Oriol to meet with the Minister of Finance (Solchaga) to arrange a gradual restructuring, as had originally been agreed, rather than a simultaneous one. Nevertheless, the overall Plan of Exchanges, which also included the financial aspect, as well as the approval for the tariffs for 1987, would not finally be concluded until after the Endesa Contract had been adapted to the new situation which these would create. Given that the two sides found it difficult to agree, this did not happen until the Ministerial Resolution of 27th November 1986, and the consequent agreement forced on UNESA of 3rd December.

3.3.2. The 'neverending' problem: Lemóniz

Iberduero's concern, once the problem of the construction of Lemóniz had been overcome, was for the sector to reach an agreement with the administration over economic and financial matters, specifically over the consequences that the PEN and the tariffs would have on the nuclear moratorium. At the beginning of October, the Administration responded to the signing of the 1983 Protocol with the consequent increase in the tariffs (6%) and the setting up of a sinking fund for the companies to partially recover the cost of the stalled nuclear plants.

The new tariff regulations (April 1984) and the agreed exchanges of assets were well received by Iberduero because the company was able to participate in the finance programme established by the government (2.8% of the revenue was given over to the restructuring of the sector and at the same time the Company was able to set a dividend of over 8%), in addition they were able to solve their particular nuclear debt. Despite this, the company mistrusted the Administration suspecting that their real intention, once the sector had been restructured, was to intervene in the management of the production through Red Eléctrica[20] (see Section 3.6), and that its discretionary conduct would weaken unity within the sector either through the new compensation system or by way of the distribution of the funds for the nuclear moratorium.

Perhaps because they were the major contributor to the compensation system, Iberduero were the first company to proceed with the exchange of assets, at the end of June. But before taking on the new nuclear acquisitions, they waited for the government to commit itself to solving the financial problems related to Lemóniz. Iberduero's stable economic situation and Hidrola's unexpected takeover bid for Hidruña (1984) allowed them certain room for manoeuvre in their negotiations with the regulator, but not as much as they would have liked because of the important coercive measures at the Regulator's disposal (tariff-related, financial, and tax-related) to direct them according to his wishes.[21]

Although the Basque company gained some important production benefits through the exchange of assets (making up the deficit caused by the inactivity of Lemóniz, intensifying their capacity and productional diversity), and the sector accepted the extension of the Endesa contract (agreement of 20th December 1984), Iberduero made this conditional on the Dirección General de la Energía guaranteeing the amortization of Lemóniz (Resolution of 19th February 1985). In fact the company stayed out of the sector negotiations over the exchange of assets with the intention of avoiding any kind of confrontation with the Administration and the other companies. The importance to them of the amortization of Lemóniz was demonstrated shortly after when Iberduero was on the point of blocking the signing of the previously mentioned second Protocol (25th February 1986), if the regulator did not change his intention to pay off Lemóniz using the capital reserves of the Company. This option would have meant assuming Lemóniz as a loss, rather than as a power station in construction, which would have contravened the legal provisions in force (The Vitoria Agreement and the Law of Intervention) and would have had grave economic and political consequences. The most immediate effect would have been the termination of the loan contracts signed for it to be constructed, particularly with foreign banks, and the impossibility of recovering costs from Lemóniz. On this occasion the Administration preferred to offer the image of a total agreement with the sector rather than to externalise the cost of the nuclear moratorium of the tariffs.

Once the doubts over Lemóniz had been cleared, Iberduero gave an important fresh impetus to their financial policy, which from this time onwards would become their main focus, replacing the traditional attention to management of energy, as well as reactivating their business organisation and diversification. In relation to the former, their aim in the short term was to participate to the fullest extent in the funds being distributed by the Ministry of Energy through the tariff (3% for recuperating financial stability, and 3.9% for the nuclear moratorium) and to be free to set their dividend, and in the medium term to achieve a definitive solution to Lemóniz. Although the latter would be complicated, according to Gomez de Pablos, because the main obstacle to normalisation in the sector was the fact that the Administration "*had not yet decided to tackle the overall problems in the sector*".[22]

3.4. Towards the overall optimisation of the sector: the Stable Legal Framework (Marco Legal Estable – MLE)

As a result of the ministerial changes of August 1986, Oriol made the Administration see the importance of drawing up an Overall Plan[23] which would give real stability to the sector. This idea should be carried out through UNESA, and would offer the Administration a realistic plan that was perfectly detailed, not just a list of subjects. The regulator favoured this type of co-operative solution, among other reasons, because of its own weaknesses in

[20] In fact, if it was not for the clarification included at the insistence of UNESA, in the Motives memorandum of the Law of Unified Operation of the National Electricity System, the text implied the nationalisation of the sector in its operational part, because the State appears as the only management of the electric system, in contrast with what was signed by the companies and the government in the 1983 Protocol.

[21] Among other measures, the economic consideration for the nuclear plants, the modulation of the compensations and the funds for financial stability, the tariff increases, the tax reductions for the exchange of assets and the accounting criteria to close the fiscal year.

[22] RIBD, 10-4-1986, p. 14.

[23] In this phase, the activity of UNESA was centred on requiring the Administration to elaborate a Global Plan that, including the assets exchange agreement, guaranteed the individual financial stability of the companies and of the sector overall. The financial stability would be articulated by means of the following actions: (a) fiscal benefits to stimulate investment; (b) exchanges of assets; (c) adequate pricing policy; d) Funds to cover the amortization of the nuclear power plants not included in the PEN; and (e) efficient financial and economic regulation.

making an exhaustive diagnosis of the sector. The Ministry of Industry and Energy also felt pressurised, on the other hand, because they had spent 3 years reaching the required level of competitiveness to face the Single Market (1992), and because the recovery of the whole sector could be badly affected by Fecsa going into receivership.[24]

Although Iberduero agreed with the idea of creating a legal framework which would sort out all the problems in the sector, it rejected the proposal that was submitted by the Administration to UNESA in February 1987. This proposal was based on a new tariff system, related to a system of compensation, which would affect all the electricity cost elements and was intended to allow the repayment of investments throughout their working lifetime, by means of a stable average annual tariff. Iberduero opposed this measure because it would average out the results of all the companies, and consequently "*the stimulus to optimization of management* would disappear".[25] This was particularly serious because the new system would eliminate their main comparative advantage, hydroelectricity, and would not include any costs derived from the nuclear moratorium.[26] Hidrola, on the other hand, defended the importance of the sector maintaining a common front in its negotiations, albeit a flexible one, which would anticipate the Administration's proposals in order to condition them to their advantage.

Iberduero was not satisfied with just participating in the discussions over the draft in order to defend its interests, on 20th May they presented a communication to the President (Felipe Gonzalez). This communication concluded that the overall stability of the sector should be achieved, primarily, by defining the supply of electricity to the whole of Spain, and that the solution of specific problems (e.g. Fecsa) should then follow from this, rather than the other way round. For this reason, the measures announced 2 days later in the Counsel of Ministers which formed a Bill for the electricity sector that would embrace all of the different legislation relating to the sector under one set of judicial regulations and would grant it the status of a public service for the supply of electricity, were seen to be a good move. But this hope disappeared a short while after when the Administration explained that the law would be passed once the MLE had been approved, because the excess in capacity was causing a delay in the revision of the PEN, and of the nuclear moratorium, of at least 1 year.

In the following months there were many meetings in UNESA to study the new tariff framework, particularly directed at standardising book values and setting a formula for remuneration. Although at first two different contrasting positions existed; that of Hidrola and other companies, who wished to set up a system which would give priority to the repayment of current assets, and that of Iberduero, which also wanted historical assets to be taken into account when setting the tariffs. On 4th August a formula for agreement was reached – except in the case of Viesgo; they would maintain the standards when these were greater than the book values and vice versa. At the beginning of September 1987, as there had been no agreement over the valuation of generation assets with the Administration, the '*ad hoc*' Commission started a second phase of negotiation: the accounting value of assets and distribution costs, as well as the accounting value of the structural costs of the sector. A month later the two entities issued a joint statement which set the value of production and distribution assets for 1987, necessary for establishing a new system of tariffs, in terms set by the Administration, which were lower than those proposed by the sector, the distribution between the companies was as yet undecided.

The Spanish electricity companies greatly appreciated the overall agreement (Proposal for a system of calculating the electricity tariffs[27] and the Decree on tariffs of 12th December 1987). Iberduero qualified it as a fundamental part of the MLE, because it would have a great impact on the balance sheet and on the '*strategic policies to be adopted by the companies*' and above all it would offer '*clearer regulations*' in relation to variables that had previously been insufficiently defined (tariffs, the Endesa contract, remuneration for hydroelectric power, etc.).[28] Hidrola followed suit because the Administration increased the value of their standard assets (and those of Hidruña) so they were higher than their book values, which allowed them to differ less, pay off sooner, and to establish a policy of individualised dividends. However, the two companies agreed in their assessment of the document approved by the Government as interventionist, it left a lot to be desired in relation to their freedom to manage their business, and above all in relation to the future viability of the sector. In particular, Hidrola criticised the exceptions the Administration made for Endesa in relation to tariffs, and Iberduero followed suit over the vagueness surrounding the problem of Lemóniz. In fact, the Basque company entered into bilateral negotiations with the Administration over the long term stability of their nuclear power station, attempting to close the gap between the recognised debt and the real debt and seeking to guarantee its recovery through real interest rates. Iberduero's negotiating efforts were worthwhile because the Resolution of 19th February 1988 established a calculation for the recognised debts on assets related to the nuclear moratorium.[29] With the setting up of a compensation fund for the amortization of the nuclear debt the company achieved, according to Gomez de Pablos, "*a significant improvement in the short term and a very favourable clarification in the long term*".[30] To the extent that the company was able to concentrate on '*the future viability of the sector and a new design for the national electricity map*'.[31]

Once the difficult exercise of fitting Endesa into the MLE had been resolved (see Section 3.5), and knowing that any concession achieved by Iberduero over the nuclear moratorium would be shared by Valdecaballeros, Hidrola emphasized the economic importance of the Order of 19th February 1988, because by regulating the companies' incentives according to deferrals, they individualised the financial management and placed, according to Oriol "*all of the companies in the sector into a clear situation of viability, in the Spirit of the Stable Legal Framework* (*MLE*).[32] Additionally the fact that the company's standards of distribution, months later, would be valued more highly than their book values (18%) was also positively received.

These good impressions were transformed, however, once the MLE went into operation because the private electricity companies began to mistrust its intentions at the moment of resolving the sector's problems. Amongst other factors, the new system did not take into account various subjects: the deviations related to the lack of water supply; the real interest rate, which they later attempted to correct by means of the periodification of the tariff;

[24] Garrués [8, p. 551–2].
[25] RIBD, 11-3-1987, p. 32.
[26] An outline of the compensation system can be seen in Maestre [20, p. 41–4].

[27] This aimed to cover the following objectives: (a) to promote the efficiency of the sector by means of the establishment of a system of incentives related to the management of the companies; (b) to reduce the instability of the tariff rates in its annual variation; (c) to recover the value of the investments in assets during their period of useful life; (d) to reduce uncertainty in order to facilitate planning decisions; and (e) to assure a fair distribution among the companies of sector incomes.
[28] RIBD, 14-1-1988, p. 3.
[29] The debt was €3261 million and was distributed in the following way: Lemóniz I (41.2%), Lemóniz II (13.1%), Trillo II (1.8%), Valdecaballeros I (28.8%) and Valdecaballeros II (15.2%).
[30] RIBD, 28-1-1988, p. 11.
[31] RIBD, 25-2-1988, p. 20.
[32] RIBD, 13-4-1988, p. 4. Refer to Landa y López de Ocariz [21], for more information on the operation of the compensations in the MLE.

the overvaluation of Fecsa's standards; or the inadequate valuation of new constructions.

At the end of July 1988, in the seminar '*Situación y Perspectivas del Sector Eléctrico Español*' the Secretary General for Energy emphasised that the electricity sector was on course towards financial stability, and that the immediate challenges were to meet the necessary investment, to offer prices similar to European companies and to prepare themselves for the Single Market. However, 1 year later Gomez de Pablos informed the Minister of Industry (Aranzadi) of his concerns in relation to the MLE, because it favoured the public sector in contrast to all the directives applied in Europe, and in their particular case, because Iberduero had lost out during the compensations between companies because their assets had been undervalued. As Iberduero recognised that the application of the MLE was a structural obstacle to the financial stability of the private companies, which were particularly sensitive to the tariff deficit,[33] and that the Administration did not favour its modification, it sought the support of UNESA and previously decided unilaterally for the first time to resort to arbitration in an administrative disagreement to resolve the losses caused by the new designs for compensation.[34]

3.5. Competition with a privileged operator: Endesa

The privileged position of Endesa became obvious, once more, when the regulator made the approval of the exchange of assets conditional on the renewal of Endesa's contract with the group of companies, and followed suit with the approval of the MLE. If the Ministerial Order of 13th February 1987 on compensations had already established a system of discriminatory costs, real costs for Endesa and standard costs for the rest of the companies, the public company wished for this to be extended to its new subsidiary companies (Erz and Enher) to make up for the smaller quantity of electricity sold to the Group of Companies. Although the administration's arbitration aimed to correct this deficit, it finally became obvious that it was essential to clarify the subject of the Endesa Contract in order to reach an agreement, because it made the private companies see, as Oriol indicated to his Executive Commission that "*there could be no stable framework without this problem being solved first*".[35]

After various months of negotiation, the regulator finally imposed the idea of 'adaptation', as opposed to the 'new contract' supported by the private companies, under threat of increasing the Endesa standards in the MLE. This adaptation of the contract, according to Oriol, would cause "*a distortion in the system, not temporary but permanent, with obvious negative consequences*".[36] This proved to be true, because with the MLE coming into force (11th December 1987), the Administration institutionalised through a judicial-public regulation[37] what had previously been a private contract for the sale of electricity by Endesa to the electricity system. As one of the directors of Iberduero (Alvarez Isasi) had commented, with the approval of the MLE Endesa's privileged situation was enshrined, and it became one more negative externality of the Spanish electricity system.

A year later, the President of UNESA (Oriol) recognised that the tariffs complied with the MLE from the point of the sector aggregate, but not when the companies were considered individually, because Endesa enjoyed a relatively high tariff for a generation company, which needed to be corrected if the definitive restructuring of the private companies was to happen. For this reason, taking advantage of the fact that the Administration was going to demand fresh investment (in the new PEN) from the private companies, he expressed to the Ministry of Industry (Aranzadi) the sector's dissatisfaction with the MLE, which as well as slowing down the restructuring, enshrined Endesa's privilege, in violation of the European Community principle of free competition. At the end of June 1989, the financial study by the Director of UNESA (Rivero) confirmed that some future solution was necessary to this problem which, according to Oriol, showed that "*Endesa was outside the framework and that the compensations fell unfairly onto Hidroeléctrica Española and Iberduero*".[38] The dissatisfaction of the electricity companies was such that, in contrast to their normal public silence, they went so far as to comment on the issue in the mass media.[39]

3.6. Red Eléctrica de España: a pool for regulation

Along with the decisions on tariffs and the increasing power of the public company Endesa, the main regulatory tool available to the Spanish state was Red Eléctrica.[40] With its progressive introduction came a transition from a system of operation run by each company individually, with bilateral contracts for the exchange of electricity, and optimisation through UNESA, to one of a *pool* of surpluses for the Spanish market managed by the new public company. On the one hand, by way of the exchange of information and sharing control in decision-making, this company managed to balance the aim of minimising costs for each electricity company in their own markets with their own aim of general optimisation. On the other hand, while managing the surpluses of electricity in each market, Red Eléctrica aimed for the minimum system cost, making use of the power stations with cheapest generation costs (in order of merit). Although Red Eléctrica did not eliminate the market power of the electricity companies over their regional monopolies, by controlling the information on high voltage electricity transmission through their central dispatching office (Cecoel), and their regional ones (Cerex-Zom), they did manage to eliminate a large number of the old asymmetries of information related to generation, transmission and, to a lesser extent, commercialisation. This was a key element contributing to the ability of the regulator to establish a system of tariffs (standard costs) that was more transparent and realistic, and as a last resort, to strengthen the socialist's system of regulation.

Red Eléctrica really became a fundamental part of the system at the end of 1990 when the socialist government, having issued the directives relevant to the transparency of prices and the transmission of electricity on large grids (90/377 and 90/547 CEE),[41] declared themselves to be in favour of a more open interpretation of the 'traditional' model of regulation. In effect, the

[33] In fact, at the beginning of July, the Chairman of Unesa explained to the Administration the problem represented by the sector's accumulated deficit, which was around €300 million. To compensate for this, the Administration would have to raise the rates by 5%, but this was not acceptable, neither political nor industrially, in the face of future international competition.

[34] See Newbery [4], p. 399–406, on the implications of the resolution of conflicts through legal channels.

[35] RHEB, 12-8-1987, p. 8.

[36] RHEB, 16-12-1987, p. 4.

[37] Ariño and López de Castro [13, p. 258].

[38] The reduction of the debt within the sector was almost exclusive to Endesa. The Iberduero and Hidrola compensations were approximately €60 million a year. RHEB. 26-7-1989, p. 4.

[39] A view on the privileges of Endesa can be seen in Martínez López-Muniz [18, p. 352–70].

[40] Garrués and López [22].

[41] Álvarez Pelegry [23, p. 298] indicates how the commissioner Cardoso in the Congress of UNIPEDE of 1991 expressed clearly the political will of the European Community to develop the domestic energy market, although "the question that worries the Commission is not whether to do it or not, but how to do it". But the process of restructuring the electric industry had already established the elementary principles for the creation of the domestic electricity market: (a) opening of generation to competition; (b) independent management of the transportation network; and (c) accounting separation of the different activities and the access of third parties to the network.

Law of the National Electric System (Ley de Ordenación del Sistema Eléctrico Nacional, L40/1994), in as much as it recognised the transmission of electricity as a specific activity that is separate from generation and distribution, placed the Red Eléctrica in charge of managing the unified operation and transmission, as well as the international exchanges of electricity. All the same, this law institutionalised a 'traditional' model of regulation (planning that was binding, unified operation, and economic regulation) because it conceived the system as one unit; a wholesale pool of all the electricity, very different from the model of 'regulation for the free market' established by the conservative government shortly after through the Law of the Electricity Sector (Ley del Sector Eléctrico, 1997) which was more developed, among other places, in the United Kingdom.

4. Business's first responses in anticipation of the market

The privileged position of Endesa, against a background of fragile recovery from indebtedness in the sector, the new investment cycle and the future European Community institutional framework for energy were elements that fanned the rumours about the modification of the Spanish electricity map. In addition to this, since April 1989, there had been speculation about different financial entities positioning themselves, encouraged by the changing balance of power brought about by bank mergers, which were causing much excitability within the sector. However, what really caused the tension to soar in the electricity sector, was the acquisition of 9.8% of Sevillana by Endesa at the end of July, in apparent violation of previous pacts within the sector. From that time onwards Hidrola and Iberduero started to examine the possibility of a reorganisation of the Spanish electricity map based on concensus with the main financial institutions and the Administration.

Although the regulator took a long time deciding what position to adopt over the new design,[42] everyone suspected there would be a process of internal restructuring, which would result in mergers. In fact, two possible models were already being suggested. One, based on two groups (Iberduero-Hidrola-Sevillana, and Endesa-Union-Fecsa), and another with three groups (Iberduero, Hidrola, and Endesa, each with the possibility of taking over smaller companies). Even the Secretary General for Energy (Perez Pita), in a talk in '*Euroforum*', justified Endesa's entry into Sevillana as a way of avoiding detrimental effects from any possible sector reorganisation carried out without the participation of the regulator.[43] However, in contrast to these models, in October 1989 rumours began to appear of a possible merger between Iberduero and Hidrola, backed up by great activity in the share values of the two companies.

In January 1990, the Administration presented their main guidelines for the restructuring of the sector. The new electricity map, which had to be agreed with the companies, would have to be drawn up by the final quarter of the year, and should basically affect generation, but not distribution.[44] Thereafter, the directors' activities were directed towards seeking a prior agreement with Endesa, but always bearing clearly in mind the fact that any reorganisation had to be previously related to the financial stability of the sector (i.e. the resolution of the problem of the nuclear moratorium – Iberduero, and the rates of return on the most recent constructions – Hidrola). Finally, the three companies drew up a guideline document, which they communicated to the Ministry of Industry, on all the problems afflicting the sector. Its first application was in the rationalisation of the Catalan market, with the setting up of a holding company between Endesa (50%), Iberduero (25%) and Hidrola (25%) which incorporated the assets of Enher, Fecsa and Hidruña. However, at the end of October 1990 the minister's proposals over the reorganisation showed marked differences from this guideline document. The plan set out by the Minister for Industry (Aranzadi) to the President of UNESA (Trincado) on 23rd October, under the unquestionable principle of the separation of generation and distribution, led to the following model; three generating companies which, through Red Eléctrica, would sell electricity to eight to ten distributors at a regulated price, the entry of Endesa into distribution, and the setting up of a management company for nuclear energy. However, Fecsa opposed their new role as merely a distributor. Endesa had changed their initial desire of regularising their situation, so it would be the same as other electricity companies, to a more limited equality in Catalonia. Meanwhile Hidrola and Iberduero defended the vertical integration of the sector, and concentration in generation as a consequence of the implementation of the PEN. As if this were not enough, this design for the sector, in as far as it assumed a greater degree of regulation in the sector, and the transformation of the electricity companies into mere distributors, according to Gomez de Pablos "*would inevitably be detrimental to Iberduero*",[45] because it would eliminate a large part of their traditional comparative advantages (hydroelectric power, and the nature of their market) with respect to the other electricity companies. In addition, in a meeting with the chairmen of the other electricity companies on 14th November, Oriol expressed his opinion that the minister's proposal was inadequate, in that it made no reference to the necessary prior readjustments (in the spirit of the MLE), it also avoided the system of compensation that was in force (which favoured Unión and Hidrocantábrico over Iberduero and Hidrola) and the privileged treatment given to Endesa (negative for all the other companies). For this reason, the two electricity companies presented a *model of reorganisation* to the other companies which would tackle the readjustments in the sector, and resolve the problem of the nuclear moratorium and when this had been achieved it would reorganise their industrial aspect,[46] aiming for their adhesion to the proposal. Finally, after many meetings to prepare a document by concensus to submit to the ministry, in the UNESA meeting of 19th December, three different proposals emerged: (a) Iberduero and Hidrola; (b) Unión and Fecsa; and (c) Sevillana.[47]

Faced with the threat that the lack of agreement would justify the regulator imposing his own criteria, Hidrola and Iberduero agreed a document, 'Joint Proposal by Hidroeléctrica Española and Iberduero for the reorganisation of the electricity sector' (2nd January 1991), which was then passed on to UNESA and the Ministry for Industry. This document defined a model for the sector which defended, in short: (a) the maintenance of the vertical structure of the companies, with new investments responding to financial criteria and efficiency, rather than the traditional demands of each market; (b) a homogenous tariff system which would ensure the recovery of past investments the nuclear

[42] In March, the Minister of Industry did not just advance possible models (vertical or horizontal integration) and includes the maintenance of the MLE and Red Eléctrica as determining factors of the restructuring, but also the new business configuration was suitable for all the companies.

[43] Some experts suggested that the final decision was going to establish the 'electric banks' after the elections. Others were against this, because they wanted to reward the industrial solutions but not the financial ones. Fabra Utray [24, p. 62].

[44] Aranzadi [25, p. 25].

[45] RIBD, 8-11-1990, p. 149.

[46] This model, maintaining the vertical integration of the companies, should guarantee to cover the demand, and the financial equilibrium of the companies and their new investments, by means of the fair distribution of the sector's funds, minimising the impact of the tariff and the final resolution of the nuclear moratorium.

[47] For unknown motives, Endesa, Hidrocantábrico and Viesgo did not define their positions. They all agreed on the nuclear holding, but not on the remainder of the Minister of Industry and Energy proposals.

moratorium, and provide incentives to new investments; (c) the unified management of nuclear plants; (d) an exchange of assets that would lead towards the financial viability of the companies; (e) the setting up of a holding company in Catalonia; and finally (f) the adaptation of Red Eléctrica to the new European Community directives. In reality, a model that was flexible to any other new European Directive that may be imposed,[48] but distanced from the structural changes which had threatened the economic and financial situation of the companies.

On 14th February the Chairmen of Iberduero, Hidrola, Sevillana, and Unión signed a joint proposal for reorganisation, to which Hidrocantábrico later signed up, and which was communicated by UNESA to the Ministry of Industry. Additionally, in meetings between the Minister and the two companies, Iberduero and Hidrola expressed their disagreements with the role of Endesa and Red Eléctrica under the unified model of operation which has been in force since that time in the Spanish electricity sector,[49] and also their concerns over the intended horizontal structure.[50] It appears that the Administration wished to strengthen the three generation 'holdings', unconnected to distribution, and partially dependent on Endesa, which after a new exchange of assets, would have a similar mix of energy with the intention of reaching an equivalent average price. As if what they were trying to achieve, according to Oriol, was to "*seek a place for ENDESA in the national electricity map*", the Chairman of Hidrola opted for ensuring the positioning of the energy produced by the public company (while avoiding its conversion into a complete cycle company as desired by the Administration) and to simultaneously resolve the two areas affected by deficits on the Spanish electricity map, those being Catalonia and Andalusia. In the former area they set up a holding company in which Endesa (50%), Iberduero (25%), and Hidrola (25%) participated, along with Fecsa, Hidruña, and Enher, and in the latter area by arranging an equal participation of each of these three companies in Sevillana (10% each), ensuring the supply of electricity in both markets through a long term contract with Endesa. Although, on 6th March Endesa and Fecsa initially agreed with the setting up of the mentioned holding companies, the Ministry for Industry rejected the proposal signed by the five companies. According to Oriol, this was because Endesa was not actually prepared to give up its particular situation and adapt itself to the EC general framework, as was shown by the case brought against Red Eléctrica and Endesa by the Directorate-General IV in Brussels. Despite the fact that contacts with the Administration were frequent, the energy contract drawn up between Red Eléctrica and EDF and the rumours, eventually unfounded, of an agreement between Endesa and Fecsa,[51] heightened the air of suspicion. This situation worsened, if that was possible, at the beginning of March, because Iberduero was unaware of the model for reorganisation proposed by Endesa and the position of Fecsa in the Catalan holding company.

The situation became much clearer when Endesa gained a controlling interest in Viesgo through a takeover bid launched on the 22nd March, in agreement with Viesgo's main shareholder–the Banco de Santander, and shortly after it acquired 2.05% of Fecsa and 1.5% of Unión from the same bank, thus becoming the largest shareholder of both companies (15% and 8.2%, respectively).[52] The response was immediate. This was when Hidrola and Iberduero considered going ahead with the 'International Autonomous Industrial and Business Project', as agreed with their main participating financial institutions (BBV and Banesto in the case of Hidrola, and BBV for Iberduero).[53] The project was presented on the 20th April to the Minister for Economy and the Treasury (Solchaga), and a day later to the Minister for Energy and Industry (Aranzadi) and the President of the National Commission for the Stock Exchange (Croissier), at the same time as they requested an interview with the President of the Government (Gonzalez).

In Extraordinary General Meetings on 30th April 1991, both companies ratified the '*Protocol for an agreement between the Boards of Directors of Hidroeléctrica Española and Iberduero*' to start a process of integration.[54] The full integration of the two companies was designed to be a prior step to the reorganisation of the sector, which would later have to be negotiated with the regulator. The chairman of Hidrola commented to his Board of Directors that this operation was in accordance with the Administration's criteria, because it favoured concentration in generation, and made it possible for a group of distributing companies to exist that would commercialise their electricity (a "mix" of equivalent production). At the same time it offered a 'vertical' solution to the problem of Endesa, by way of the private companies handing over markets, given that the Administration wanted Red Eléctrica to be in charge of the functional organisation of generation; all in all, giving them full control over the sector in the national and international sphere. Nevertheless, this solution did not follow the model desired by the regulator, because it maintained the integration of generation and distribution.

The statutes of the holding company were modified in the session on 7th May, the Board of Directors was constituted (with Gomez de Pablos as Honorary President and Iñigo Oriol as Chairman) and the new company was presented to the media.

While this was happening, Endesa responded with a strategy of great significance by taking over the main companies in the Catalan and Andalusian markets (by acquiring 33.5% of Sevillana in June 1991, and 45.7% of Fecsa in September 1992).

The hidden confrontation between Iberdrola and Endesa was laid to rest through an overall agreement between the two companies. This agreement, which was designed to promote a 'strategic and financial convergence' between the two groups and avoid the conflicts of the past, led to numerous meetings with the Ministry for Industry and Energy, in order for them to consider the modification of certain aspects of the MLE: the homogenisation of the payments for assets exchanged in 1985 and the search for solutions to the nuclear moratorium. The first of these matters was achieved through a second exchange of assets (UNESA Protocol of 2nd December 1993), and the second was settled definitively with the complete paralisation of the work on the nuclear plants affected by the moratorium and compensation for their cost through the tariffs, related to investment and finance, as well as the repackaging of the debt, as a result of the additional stipulations in the Law of 30th December 1994 on the National Electricity System (LOSEN).

However the fundamentals of the 'new' regulation took time to establish themselves. The conservative government of the Partido

[48] Steiner [26, p. 27] shows with very clear graphics the divergent models of integration in Europe.

[49] In fact, the private electricity companies denounced the agreement between Red Eléctrica and EDF to the Administration because they understood that this contract surpassed extensively the powers legally conferred to the public company due to what its compliance required of the privately owned generation plants.

[50] See Ortega-Jackson [27] on the different structures of the electricity system.

[51] This broke the agreement of November 24, 1988, because the Chairman of Fecsa should have reported this strategic decision to the remainder of the companies previously.

[52] Its subsequent development clarifies the peculiar position maintained by the Administration which, on the one hand, seemed to be promoting an electricity model which was not integrated and, on the other hand, it strengthened the vertical integration of Endesa, Arocena et al. [6, p. 394].

[53] A protocol that implied, according to Gómez de Pablos "a complete agreement between the Chairmen of Hidroeléctrica Española, Iberduero and the four banks present in both companies to initiate the process of integration". RIBD, 30-4-1991, p. 240.

[54] RHEB, 30-4-1991, p. 3.

Table 1
1998 Electricity production and sales. Notes: These totals includes 2.7 GW and 8.645 TWh extrapeninsular generation on the Canaries, Balearic Islands, Ceuta and Melilla generated by Endesa and 0.155 GW and 0.61 TWh extrapeninsular generation by autoproducers. These totals also include 9 TWh sales by Endesa to 1.3 million extrapeninsular customers. *Source*: Fraser [29].

Producer	Capacity (GW)	Net generation (TWh)	Share of generation market (%)	Customers (millions)	Sales (TWh)	Retail market share (%)
Endesa group	22.9	85	48	9.4	74	44
Iberdrola	16.3	47	26	8.3	62	37
Fenosa	5.2	19	11	2.8	22	13
Hidrocantabrico	1.7	8	4	0.5	7	4
Total central	46.2	159	89	20.8	165	98
Production/sales						
IPP ("special regime")	5.5	20	11			
Small distributors				0.2	3	2
Total	51.7	179	100	21	168	100

Popular, by approving the Law of 27th September 1997 on the electricity sector which repealed the LOSEN, sought to adapt the Spanish legislation to the EC directive (December 1996) on the internal electricity market and to shape the changes in regulation to what had been agreed in the new Protocol signed on 11th December 1996 by the Ministry for Industry and Energy, and the electricity companies (Iberdrola, Endesa, Union Fenosa and Hidrocantábrico).

Nevertheless, the final chapter in the dialectical relations between the regulator and the regulated companies; which went from regulation that many viewed as very interventionist, to the desired system, still incomplete according to some, that represents the free market with regulated competition; is a story which, apart from the official literature, is still to be written, at least the part that is relevant from a perspective of neo-institutionalist analysis (Table 1).[55]

5. Conclusions

While in some western countries during the 70s and 80s people began to question the efficiency of the old model of regulation established after the Second World War,[56] in Spain the setting up of any kind of efficient electricity policy with which to face the oil crisis and the change to democracy implied the transfer of institutional and market power from the electricity companies to the State. This was not a simple process. The regulator was firmly committed to changing old routines, and was supported by the necessary legal framework, however he lacked the technical experience, and an adequate institutional system; reliable agencies, a large enough body of staff, sufficient economic support; and above all, the information necessary to have a perfectly defined agenda for regulation. The result of this, as we have seen, was particularly distinctive. It was very interventionist and vague regulation which, as it required the collaboration of the electricity companies, was presented by the public administrators as the fruit of concensus, and also because of its results, as being relatively efficient in solving the problems affecting the sector. On the contrary, the most critical legal and economic studies have emphasized the incoherence in its legal precepts and the lack of efficiency in its conduct related to property, management, and the free market. However, few commentators have taken into account the historical and institutional context of the decision-making of those involved which tended to moderate and qualify a large number of the value judgements made in both the legal and economic sense.

On this subject, starting from the description of the historical evolution of the sector, it is worth considering a critical analysis as to whether the institutional path chosen by the Government (the Administration or the Regulator), and by the private electricity companies was the most beneficial, from the point of view of its economic and social efficiency. Above all, I believe that the economic situation (depression, the result of the oil crisis and its consequences in an economy in complete transformation), and the political and social situation (unrest, due to the great uncertainty inherent in a new democracy after decades of dictatorship), were not the most ideal for the development of the best economic policy, and in this case electricity policy. As a consequence the early democratic governments (centre-right—UCD, and centre-left—PSOE) found their room for manoeuvre very limited, and heavily conditioned by the task of constructing the new Democratic State. In the case that concerns us, from a general point of view, there were two possibilities. The first would have been to continue with the system of self-regulation of the electricity sector by the companies, which some insist would have been perfectly satisfactory for the companies and for the consumers, with State intervention being kept to the absolute minimum. If this old model had been maintained, Spain would once more have been an exception in the western world, and the consumers – through higher tariffs, would probably still be paying a high cost for the inefficiencies of a system of inadequately integrated local monopolies, as well as for the excess capacity generated by the nuclear programme. The second possibility would have been to seek a regulatory model that was less interventionist and favoured the market. This model was not very realistic if we consider that the majority of European countries, when they adopted policies that initiated processes of liberalisation and/or deregulation, started from the opposite situation; the state previously had total control of the sector, either because it was nationalised or strongly regulated by the state or other regional or federal authorities. In Spain, for example, it would have been very difficult for an independent regulator to establish an efficient distribution of resources between consumers and shareholders while the companies had such a strong market power in the areas where they acted, and also benefited from significant asymmetries of information, neither of which they would have relinquished willingly. One must also remember that the companies complained, at times rightly, of strong state intervention which limited their freedom of management, but never with the intention of defending free competition, rather one of defending the *status quo* in the sector. At no time, in fact, did they propose any serious alternative to the model then in force, but rather they conditioned the regulator's strategy in the way that best suited their interests taking advantage of the fact that investment decisions were ultimately in their hands, and above all their greater knowledge of the business and the markets. On the other hand, the introduction of a system of returns based on marginal prices, under a modern

[55] Glachant and Finon [28].
[56] Gilbert and Kahn [5], Hirsh [30], Chick [31], Hausman et al. [32, p. 262–4].

system of a pool, which favoured the entry of new participants into the market, in those years would have been, at the very least, untimely and not very well received given the social-democratic element of the Government during the period that concerns us.

Does this mean that the 'traditional' model of regulation adopted was the only one possible and the most suitable? Evidently not, because other possibilities existed apart from the two mentioned, as well as the one which was eventually put into practice. The state of research does not allow us to be very precise on this matter, but it could be interesting, as well as instructive, to summarise the advantages and disadvantages connected to the establishment of this 'traditional' model of regulation, because it offers certain keys as to the starting point from which the 'new' model of regulation for the free market was organised. The main problem with the 'traditional' regulation was the deep distrust between the agents (the regulator and the companies) as to what would be the most effective model to produce a suitable distribution of resources between consumers and shareholders. Moreover, these interest groups remained in the background and did not participate actively in the process of negotiation in the sector. In this situation, the transfer of powers from the electricity companies to the state was carried out using all of the coercive powers legally available to them under the new democratic regime, they required the support of the companies – meaning their main shareholders, more from the necessity of limiting the amount of incomplete information than from any conviction that their participation was essential for the healthy development of the sector. At first, the dramatic effect of the justifiable nuclear moratorium, and above all, the very controversial nationalisation of the HVG, and later on the persistent favouritism shown towards the Public company Endesa, progressively eroded the traditional power of UNESA, increasing its veiled opposition. It is also very true that the electricity companies, affected by the oil crisis and their own bad management (mainly the excess of capacity, the drop in demand, and their deep indebtedness), adopted an ambiguous defensive strategy. They co-operated with the regulator in policies leading to the financial stability of the sector, but they were very reluctant to offer transparent information on the sector's problems and at all times they tried to externalise a large part of their bad management through the tariffs and institutional aid. The electricity companies, in any case, believed that the co-operation, as well as helping to avoid their image as a vested interest, also represented the best tactic for influencing the effects of regulation, partly through anticipating the regulator's actions, and partly through their conditional support, at times delaying or withheld, for the decision-making of the Government.

However, there were not only disadvantages. The new regulatory model, although it was described as 'traditional' had important advantages. Firstly, with the country absorbed in the political changes, there was little social opposition to it. There are many citizens who even today do not know that a percentage of their electricity tariffs go to covering the cost of the nuclear moratorium or the fact that Red Eléctrica de España came about as the result of 'nationalising' the HVG, which had been the property of the electricity companies. Secondly, setting a standard tariff based on the cost of the service (MLE), although not without flaws, partially eliminated a lot of the old lack of transparency, and given that the price went down in real terms this benefited the consumers, and because it provided greater stability and easier forecasting, it was not highly criticised by the companies, except in as far as it referred to the favourable treatment received by Endesa.[57] Thirdly, the creation of a pool of electricity, as a tool of regulation, had an unprecedented impact on the optimisation of generation and transmission within the Spanish electricity system, particularly because with reduced temporary and economic costs, it became a key element in the new regulation for the free market in accordance with the new European directives promoting liberalisation and competition in the sector. Fourthly, strong regulation in the sector fulfilled the objective of democratising electricity policy, which as a result was formulated by institutional and professional staff that were better trained and equipped, which allowed them to direct, and criticise, the new challenges in regulation in the new European energy framework with a greater chance of success. Finally, as a result of all these changes, the electricity companies have been forced to modernise their business culture to find the most stable and wealthy balance between their traditional priorities of investment and the management of energy resources, to include efficient financial and economical administration, with an increasing sense of social-environmental responsibility in the service it provides to society as a whole, and especially to its consumers.

[57] For more detailed information on the impact of the tariff, see Arocena et al. [33], and for the effects of the regulatory changes (cost and price of the service) in improving the efficiency of the companies – public or private, see Arocena and Waddams [34].

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